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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,905	08/22/2003	Osamu Isaji	50926/DBP/A400	1331

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EXAMINER

ALSOMIRI, ISAM A

ART UNIT PAPER NUMBER

3662

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,905

Applicant(s)

ISAJI, OSAMU

Examiner

Isam Alsomiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 10-15, 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Note: this is a supplemental action to the office action mailed on January 13, 2006. The time for response has been reset from the mailing date of this action.

Election/Restrictions

Applicant's election of the second species group, namely, claims 1-9 and 13-16 for Figure-11 in the reply filed on October 28, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Okubo et al US005973636A.

Referring to claims 1 and 13 Okubo discloses in figure 4 an FM-CW radar system which frequency-modulates a voltage-controlled oscillator 30 by applying thereto a modulating signal from a modulating signal generator, and which transmits a frequency-modulated wave by time division ON-OFF control and receives a reflected wave by time

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division ON-OFF control (see Abstract), wherein the system includes means for varying a frequency used to perform the time division ON-OFF control, and means for discriminating a signal component varying in response to the variation of the frequency, thereby discriminating a signal related to a target object from other signals (see col. 4 lines 26-59, col. 8 lines 1-31).

Referring to claims 6 and 15, Okubo discloses in figure 4 an FM-CW radar system which frequency-modulates a voltage-controlled oscillator by applying thereto a modulating signal from a modulating signal generator, and which transmits a frequency-modulated wave and receives a reflected wave, wherein the system is of a single-antenna type which switches between transmission and reception by time division (see Abstract, col. 3 lines 35-45), and includes means for varying a frequency used for the transmission/reception switching, and means for discriminating a signal component varying in response to the variation of the frequency, thereby discriminating a signal related to a target object from other signals (see col. 4 lines 26-59, col. 8 lines 1-31).

Referring to claims 2, Okubo teaches the time division ON-OFF control is performed either when transmitting or when receiving (see Abstract).

Referring to claims 3, 7, Okubo teaches the modulating signal is a signal in the form of a triangular wave, and the means for varying the transmission/reception switching frequency varies the frequency for every plurality of the pairs (see figure 19).

Referring to claims 4, 8, Okubo teaches the modulating signal is a signal in the form of a triangular wave, and the means for varying the transmission/reception

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switching frequency varies the frequency for each of upward and downward slopes of the triangular wave (see figure 19).

Referring to claims 14 and 16, it's inherent that the pattern includes a prescribed OFF period (see col. 7 lines 54-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al US005973636A in view of Senio et al. US006476755B1 or Marin US 4,935,742. Okubo is silent about having means for varying the transmission/reception switching frequency switches the frequency randomly. Senio and Marin teaches similar systems where both teach switching the transmitting/receiving frequency randomly (see Senio col. 6 lines 44-46; Marin col. 2 lines 31-44). It would have been obvious to modify Okubo to vary the switching randomly to distinguish the reflected signals from noises such as reflection of other radar signals.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

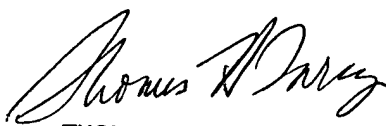
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



January 8, 2006



THOMAS H. TARCZA
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TECHNOLOGY CENTER 3600